1. Please enter the name of the person to contact regarding this submission.

Joshua Miller

    a. Please enter their phone number for follow up questions.

(607) 735-5424

    b. Please enter their e-mail address for follow up contact.

josmiller@elmiracityschools.com

2. Please indicate below whether this is the first submission, a new submission or an amended submission of a Smart Schools Investment Plan.

    ☑ First submission
    ☐ Supplemental submission
    ☐ Amended submission

3. All New York State public school districts are required to complete and submit a District Instructional Technology Plan survey to the New York State Education Department in compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner's Regulations. Districts that include investments in high-speed broadband or wireless connectivity and/or learning technology equipment or facilities as part of their Smart Schools Investment Plan must have a submitted and approved Instructional Technology Plan survey on file with the New York State Education Department.

    By checking this box, you certify that the school district has an approved District Instructional Technology Plan survey on file with the New York State Education Department.

    ☑ District Educational Technology Plan Submitted to SED and Approved

    ▪ Instructional Technology Plan was approved by NYSED on September 21, 2015 Available at: http://www.elmiracityschools.com/technology.cfm

4. Pursuant to the requirements of the Smart Schools Bond Act, the planning process must include consultation with parents, teachers, students, community members, other stakeholders and any nonpublic schools located in the district.

By checking the boxes below, you are certifying that you have engaged with those required stakeholders. Each box must be checked prior to submitting your Smart Schools Investment Plan.

☑ Parents
☑ Teachers
☑ Students
☑ Community Members

a. If your district contains non-public schools, have you provided a timely opportunity for consultation with these stakeholders?

☑ Yes
☐ No

5. Certify that the following required steps have taken place by checking the boxes below: Each box must be checked prior to submitting your Smart Schools Investment Plan.

☑ The district developed and the school board approved a preliminary Smart Schools Investment Plan.
☑ The preliminary plan was posted on the district website for at least 30 days. The district included an address to which any written comments on the plan should be sent.
☑ The school board conducted a hearing that enabled stakeholders to respond to the preliminary plan. This hearing may have occurred as part of a normal Board meeting, but adequate notice of the event must have been provided through local media and the district website for at least two weeks prior to the meeting.
☑ The district prepared a final plan for school board approval and such plan has been approved by the school board.
☑ The final proposed plan that has been submitted has been posted on the district's website.

a. Please upload the proposed plan that was posted on the district's website.

See http://www.elmiracityschools.com/technology.cfm for the proposed plan.

6. Please enter an estimate of the total number of students and staff that will benefit from this Smart Schools Investment Plan based on the cumulative projects submitted to date.

> 7,163
> - 6,264 students according to the 2015 BEDS
> - 899 full-time staff

7. An LEA/School District may partner with one or more other LEA/School Districts to form a consortium to pool Smart Schools Bond Act funds for a project that meets all other Smart School Bond Act requirements. Each school district participating in the consortium will need to file an approved Smart Schools Investment Plan for the project and submit a signed Memorandum of Understanding that sets forth the details of the consortium including the roles of each respective district.

> ☐ The district plans to participate in a consortium to partner with other school district(s) to implement a Smart Schools project.
> Not applicable

8. Please enter the name and 6-digit SED Code for each LEA/School District participating in the Consortium.

Partner LEA/District	n/a	SED BEDS Code	n/a

9. Please upload a signed Memorandum of Understanding with all of the participating Consortium partners.

> Not applicable

10. Please enter your district's Total Allocation of Smart Schools Bond Act funds. This amount is available at: http://programs.governor.ny.gov/smart-schools-ny
    A complete listing of all district allocations is available on the SSBA website.

> $7,090,526

11. Enter the budget sub-allocations by category that you are submitting for approval at this time. If you are not budgeting SSBA funds for a category, please enter 0 (zero.) If the value entered is $0, you will not be required to complete that survey question.

	Sub-Allocations
School Connectivity	$3,994,749
Connectivity Projects for Communities	$0
Classroom Technology	$0
Pre-Kindergarten Classrooms	$0
Replace Transportable Classrooms	$0
High-Tech Security Features	$2,196,700
Unallocated Funds	$899,077
Totals:	$7,090,526

1. Briefly describe how you intend to use Smart Schools Bond Act funds for high-speed broadband and/or wireless connectivity projects in school buildings.

> There are 3 main components of the projects proposed for School Connectivity:
> - Upgrade to the wireless network: this project will increase the speed, throughput, and penetration of the wireless network by installing new wireless access points in each classroom in order to accommodate a minimum of 1 device per person and in some spaces 2 devices per person. New access points will be connected to the backbone with a Cat6 and Cat6A connection in order to increase the available bandwidth and capacity on each access point. High capacity areas such as cafeterias, gymnasiums, and auditoriums will include additional access points to support more users. Network switches in the closets will receive upgrades to add capacity to accommodate the additional access points.
> - Expansion of the backbone network infrastructure to include multiple data transmission paths: this project will provide a secondary path for data transmission in the event of a slowdown or disruption of service on the primary path. Network switches will be installed in each building that connect by existing fiber to the primary Network Operations Center (NOC) and a secondary Network Operations Center in a geographically diverse location. The network will be re-engineered so that all data utilizes the best routing path between the primary and secondary NOC. A secondary, diverse, fiber connection will be added to the primary NOC and the secondary NOC to provide an alternate path in the event of a fiber break. Additional network equipment will be required to bring the secondary NOC online.
> - Replacement of aging fiber and copper cabling: this project will replace copper and fiber cabling that has been identified to require replacement due to the age or threat of impending failure that will cause a disruption in telecommunications.

2. Briefly describe the linkage between the district's District Instructional Technology Plan and the proposed projects.(There should be a link between your response to this question and your response to Question 1 in Part E. Curriculum and Instruction "What are the district's plans to use digital connectivity and technology to improve teaching and learning?)

> The Instructional Technology Plan identifies a goal to pursue the upgrade of the wireless network in order support the expanded and continued use of mobile network devices. The upgrade of the wireless network will meet this goal identified in Part E Question 1.
>
> The Instructional Technology Plan also established a goal to provide an alternative route to the regional network in order to improve network stability for daily classroom instructional use and computer based testing. The expansion of the backbone network

> infrastructure will increase network stability in the event of a fiber break, power outage, or equipment failure by providing an alternate path for data transmission.
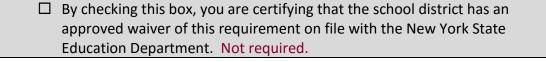>
> The replacement of aging fiber and copper cabling will also improve network stability and protect the disruption of telecommunications required for daily instructional usage in the classrooms and building affected.

3. To ensure that districts maximize the return on their investment in education technology and devices, Smart Schools Bond Act funds used for technology infrastructure investments must increase the number of school buildings that meet or exceed the Federal Communications Commission minimum speed standard of 100 Mbps per 1,000 students.

    Please describe how you will use SSBA funds to meet this standard.

> The SSBA funds will meet this standard by providing additional bandwidth and stability to the network backbone. The majority of the district network is currently connected to the Network Operations Center by 10gb links between network closets and between buildings. The proposed projects will provide stability to these internal links. The connection between the district and the host of internet services at GST BOCES provides for flexibility in order to increase available bandwidth to meet this standard. Improving the network backbone and providing an alternate path to GST BOCES will improve the district's ability to meet this standard.

    a. If a district believes that it will be impossible to meet this standard within 12 months, it may apply for a waiver of this requirement, as described on the Smart Schools website. The waiver must be filed and approved by SED prior to submitting this survey.

    > ☐ By checking this box, you are certifying that the school district has an approved waiver of this requirement on file with the New York State Education Department. Not required.

4. If the district wishes to have students and staff access the Internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust Wi-Fi network in place that has sufficient bandwidth to meet user demand.

    Please describe how you have quantified this demand and how you plan to meet this demand.

The current Wi-Fi network was designed in 2009 with a goal of achieving 100% coverage. Although the district technically has 100% coverage, access points located in hallways spread out between 3-4 rooms do not allow for the number of students in a classroom to be able to access the wireless network with a device per person. When whole classrooms of students attempt to utilize a laptop cart, the wireless network is bogged down after about the 15th student.

The upgraded Wi-Fi network will include 1 access point per classroom in order to locate the access points closer to the devices in use (and therefore increase the strength of the signal) and access points will have two connections back to the network closet in order to double the available capacity. Additional capacity will be available in the future by including one connection with Cat6A cabling, allowing for additional capacity up to 10gb if additional upgrades are made to network switches in the future.

These improvements will allow for a minimum of 1 device per student in each classroom and in some cases 2 devices per student.

5. As indicated on Page 5 of the guidance, the Office of Facilities Planning will have to conduct a preliminary review of all capital projects, including connectivity projects.

    Please indicate on a separate row each project number given to you by the Office of Facilities Planning.

    Project Number: 07-06-00-01-7-999-012
    Project Number: 07-06-00-01-7-999-SB1

6. Certain high-tech security and connectivity infrastructure projects may be eligible for an expedited review process as determined by the Office of Facilities Planning.

    Was your project deemed eligible for streamlined review?
    ☐ Yes
    ☑ No

    a. Districts that choose the Streamlined Review Process will be required to certify that they have reviewed all installations with their licensed architect or engineer of record and provide that person's name and license number.

        The licensed professional must review the products and proposed method of installation prior to implementation and review the work during and after completion in order to affirm that the work was code-compliant, if requested.

☐ I certify that I have reviewed all installations with a licensed architect or engineer of record. Not Required

7. Include the name and license number of the architect or engineer of record.

Name	License Number
Jeff Robbins, Hunt Engineers and Architects	35151

8. If you are submitting an allocation for School Connectivity complete this table.
    Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Network/Access Costs	$3,905,374
Outside Plant Costs	$82,875
School Internal Connections and Components	$6,500
Professional Services	$0
Testing	$0
Other Upfront Costs	$0
Other Costs	$0
Totals:	$3,994,749

9. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be eligible for tax-exempt financing to be reimbursed through the SSBA. Sufficient detail must be provided so that we can verify this is the case. If you have any questions, please contact us directly through smartschools@nysed.gov.

    Add rows under each sub-category for additional items, as needed.

Allowable Expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
1. Network/Access Costs	Cisco AIR-AP2702I-x-K9: Dual-band, controller-based 802.11a/g/n/ac	736	$950	$699,200
2. Network/Access Costs	Category 6 Data Cabling Installation for Wireless Access Points - Construction budget for one Category 6 data cable from the data closet patch panel to each planned wireless access point location. Estimate includes cabling, installation, terminations, testing and labeling. This work will be competitively bid after SSBA approval and SED Facilities approval.	736	$1,200	$883,016
3. Network/Access Costs	Cisco Catalyst 4500 10/100/1000 PoE+ Line Card Model # WS-X4648-RJ45V-E	26	$6,350	$165,100

Allowable Expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
4. Network/Access Costs	Cisco C2960X 48-port PoE+, 750W, 2 x 10G SFP+, LAN Base	13	$3,800	$49,400
5. Network/Access Costs	Cisco FlexStack 50cm stacking cable	13	$100	$1,300
6. Network/Access Costs	Catalyst 2960-X FlexStack Plus Stacking Module	13	$600	$7,800
7. Network/Access Costs	Cisco Catalyst 3850 24 Port 10G SFP+ - Model # WS-C3850-24XS	2	$18,000	$36,000
8. Network/Access Costs	Cisco Catalyst 3850 48 Port PoE IP Base - Model # WS-C3850-48P-S	10	$8,000	$80,000
9. Network/Access Costs	CAT3850 UNIVERSAL W/O DTLS - Model # S3850ULPEK9-32-0SE -	12	$1,500	$18,000
10. Network/Access Costs	Cisco 10K Bi-Di 10G SFP Model #'s SFP-10G-BX10D-I & SFP-10G-BX10U-I	40	$12,000	$480,000
11. Network/Access Costs	Cisco Catalyst 3850 4 x 10GE Network Module - Part # C3850-NM-4-10G=	10	$3,000	$30,000
12. Network/Access Costs	Category 6 Data Cabling Installation & Removal of the Existing Category 5 data cabling - Construction budget for one Category 6 data cable from the data closet patch panel to wall outlet locations. Estimate includes cabling, installation, terminations, testing and labeling. This work will be competitively bid after SSBA approval and SED Facilities approval.	See lines 13-18	See lines 13-18	See lines 13-18
13. Network/Access Costs	Broadway School - Replace existing Cat 5 Data Cabling with Cat 6 Data Cabling	175	$600	$105,000
14. Network/Access Costs	Diven Elementary - Replace existing Cat 5 Data Cabling with Cat 6 Data Cabling	50	$600	$30,000
15. Network/Access Costs	Ernie Davis Academy - Replace existing Cat 5 Data Cabling with Cat 6 Data Cabling	90	$600	$54,000
16. Network/Access Costs	Elmira High School - Replace existing Cat 5 Data Cabling with Cat 6 Data Cabling	90	$600	$54,000
17. Network/Access Costs	Fassett Elementary - Replace existing Cat 5 Data Cabling with Cat6 Data Cabling	10	$600	$6,000
18. Network/Access Costs	Pine City Elementary - Replace existing Cat 5 Data Cabling with Cat 6 Data Cabling	7	$600	$4,200
19. Network/Access Costs	Data room improvements at Booth School - Each data room will receive a 3/4 ton split AC unit to cool the equipment.	1	$11,850	$11,850
20. Outside Plant Costs	Ernie Davis Academy - District Fiber Outside Plant Reconfiguration - Quote from STN to add an additional 2-strands of fiber optic cabling to EDA building from the STN Backbone. These fibers will be reconfigured with the other schools to create load balancing and multiple paths for data traffic.	1	$18,550	$18,550
21. Outside Plant Costs	Elmira High School - District Fiber Outside Plant Reconfiguration Quote from STN to add an additional 2-strands of fiber optic cabling to EDA building from the STN Backbone. These fibers will be reconfigured with the other schools to create load balancing and multiple paths for data traffic.	1	$31,825	$31,825
22. Outside Plant Costs	Ernie Davis Academy - A 12-strand OS2 single mode fiber optic cable will be installed to replace the existing fiber optic cable that is no longer is satisfactory condition. The fiber pathway beneath the walking bridge will need to be replaced as it is becoming unattached from the structure. Installation will include the removal of the existing cable, installation of the new cabling, terminations, testing and conduit pathway improvement under the walking bridge. This work will be competitively bid after SSBA approval and SED Facilities approval.	1	$32,500	$32,500

Allowable Expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
23. School Internal Connections and Components	Network Monitoring Digital Signage - A Model: P553-DRD 55" NEC commercial grade Digital Sign will be installed in the district's Network Operations Center that will display network status to the IT support team in an effort to react quickly to down time.	1	$3,000	$3,000
24. School Internal Connections and Components	Installation & Mounting hardware for network monitoring digital sign. Installation to include a Peerless wall mount & associated hardware, power outlet installation, media player programming, Cat 6 data cabling to the MDF from the TV location in the IT offices and labor. This work will be competitively bid after SSBA approval and SED Facilities approval.	1	$3,500	$3,500
25. Network Access Costs	Project Incidentals for network switch & wireless Upgrade project - Construction Administration/Management, costs, legal & bidding fees, Architectural and Engineering fees, testing & contingencies	1	$1,190,508	$1,190,508

1. Describe how you intend to use Smart Schools Bond Act funds to install high-tech security features in school buildings and on school campuses.

> There are 4 main components to the projects proposed for High-Tech Security Features:
> - Centralized DVMS Storage: this project will involve the replacement of 37 near end-of-life servers that are currently distributed in network closets in each school with 8 servers connected to high speed storage area network (SAN) devices and centralized into 4 network closets in 4 schools. The SANs will provide additional storage capacity necessary to upgrade analog cameras to IP cameras and maintain the required retention period for security video.
> - Security camera upgrades: this project will identify the analog cameras in the highest priority locations in each school and replace them with IP cameras with better quality and higher resolution. New cameras may also be added to high priority locations that currently do not have adequate video coverage, as determined by school administrators.
> - Standardized secure entrances and features: this project will standardize the equipment and procedures for building entrances at each school to include a buzzer, intercom, and camera located at each entrance that will allow staff to screen all individuals requesting access to a school with the ability to see and talk to the person before access to the school is allowed.
> - Security Film on school entrances and windows: this project will include the installation of security door film on the interior vestibule doors at each school. The exterior doors have had door film installed previously and this additional work combined with the additional main entrance access control devices, will provide the district with a standardized secured entrance into each of its buildings across the district.

2. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

   Please indicate on a separate row each project number given to you by the Office of Facilities Planning.

> Project Number: 07-06-00-01-7-999-012
> Project Number: 07-06-00-01-7-999-SB1

3. Was your project deemed eligible for streamlined Review?

☑ Yes
☐ No

a. Districts with streamlined projects must certify that they have reviewed all installations with their licensed architect or engineer of record, and provide that person's name and license number. The licensed professional must review the products and proposed method of installation prior to implementation and review the work during and after completion in order to affirm that the work was code-compliant, if requested.

☑ By checking this box, you certify that the district has reviewed all installations with a licensed architect or engineer of record.

4. Include the name and license number of the architect or engineer of record.

Name	License Number
Jeff Robbins, Hunt Engineers and Architects	35151

5. If you have made an allocation for High-Tech Security Features, complete this table.

Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Capital-Intensive Security Project (Standard Review)	$1,544,000
Main Entrance Electronic Security System (Streamlined Review)	$0
Main Entrance Entry Control System (Streamlined Review)	$55,000
Approved Door Hardening Project (Streamlined Review)	$254,000
Other Costs	$343,700
Totals:	$2,196,700

6. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category. This is especially important for any expenditures listed under the "Other" category. All expenditures must be eligible for tax-exempt financing to be reimbursed through the SSBA. Sufficient detail must be provided so that we can verify this is the case. If you have any questions, please contact us directly through smartschools@nysed.gov.

Add rows under each sub-category for additional items, as needed.

Allowable Expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
1. Capital-Intensive Security Project (Standard Review)	Digital Video Management Storage Appliance - Centralized storage arrays at four district buildings.	4	$250,000	$1,000,000
2. Capital-Intensive Security Project (Standard Review)	Avigilon 3MP IP Camera - Interior	84	$2,800	$235,200
3. Capital-Intensive Security Project (Standard Review)	Avigilon 5MP IP Camera - Exterior	84	$3,200	$268,800
4. Capital-Intensive Security Project (Standard Review)	Two-way radio upgrade - Each building will receive a networked two-way radio repeater that will ensure all district radios will work on the district's property in the case of an emergency. The district currently has issues with its two-way radio coverage several in of the elementary schools.	1	$40,000	$40,000
5. Main Entrance Electronic Security System (Streamlined Review)	Standardized Secured Entrance Devices - Construction Estimate for the installation of Card Readers, Intercoms, Door Contacts, request to exit sensor, Electrified door strikes or retraction hardware.	11	$5,000	$55,000
6. Approved Door Hardening Project (Streamlined Review)	Security Door Film - Construction Estimate for the installation of security door film on the vestibule storefront glass at each building's main entrance. The security door film prevents the glass from being broken easily and delaying any breach into the building through the existing storefront glass.	1	$254,000	$254,000
7. Other Costs	Total Security Project Incidental Costs	1	$343,700	$343,700